

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, \$\$)	H. Additional Information
11 South Carolina State Measures							
Comments: Modeling for 2007, shows attainment without including measures beyond national and regional measures already finalized.. 2012 and 2017 also shows attainment. Our continuing EAC programs are also related to maintenance.							
11 Appalachian, SC (Effective date of nonattainment designation deferred) Spartanburg County							
School Bus Retrofit Project	Approximately 20 diesel buses will be retrofitted particulate filters during 2006. (additional reductions of PM are also expeted)		2006	340 lbs/year	N/A	N/A	CO reductions 2,380 lbs/year December 2004 EAC SIP - Appendix 16
<p style="text-align: center;">SPARTANBURG COUNTY, SC DECEMBER 2005 EAC PROGRESS REPORT</p> <p style="text-align: center;">Based on stakeholder consultation and taking into consideration resource and political constraints, the following control measures are under consideration pending modeling that demonstrates compliance in 2007 by SCDHEC. It is anticipated these measures under consideration will assist the County of Anderson, Greenville, Spartanburg, South Carolina, in achieving and/or maintaining the 8-hour ozone standard by 2007.</p>							
Air Quality Awareness and Improvement Policy	Memorandum sent to all County department head as well as elected and appointed officials for the purpose of establishing certain principles that will guide the recurring activities of County government. Effective immediately: 1. Encourage that all county employees are notified of upcoming Ozone Action Days. 2. Encourage car-pooling opportunities. 3. Ensure that all County vehicles and equipment are operating according to the manufacturer's specifications. 4. Restrict vehicle idling to no more than 5 minutes. Exceptions include emergency vehicles, traffic/weather conditions, and vehicles being repaired, maintained, or inspected. 5. Restrict mowing and use of gas powered lawn equipment on County property on Ozone Action Days. 6. Restrict all outdoor burning on Ozone Action Days. 7. Energy energy conservation in all County facilities. 8. Include environmental considerations in purchasing decisions for goods and services. An example of such would be to purchase Energy Star equipment. SEE Comment #6	on-going	Effective immediately - October 6, 2004	directionally sound	directionally sound	N/A	The commitment to address these activities has been assured by the County Administrator by establishing the Air Quality Awareness and Improvement Policy for County Government. 1. See comment....
1. Support SCDHEC statewide efforts to reduce ozone levels.	Stakeholder group to support and participate in modeling efforts. Develop stakeholder group to participate in development of regulations (NOx - BACT (Best Available Control Technology Economically Achievable), restrict open burning). Members of the Upstate Air Quality Staff Advisory Committee participated WITH dhec in the development of new regulations aimed at reducing NOx emissions. As a result, new regulations requiring Nox- BACT (Best Available Control Technology Economically Achievable) were adopted in mid 2004.	December 2004 EAC SIP did include Appendix 16 - 1. SC61-62.2 "Prohibition of Open Burning" regulation with reductions for 2007 calendar year - reductions expected during the ozone season for residential construction waste 2. SC61-62.5, Std. 5.2 "Control of Oxides of Nitrogen" reduction amount for both existing and new sources combined across Anderson, Greenville, Spartanburg for 2007 calendar year 3. June 24, 2004 - Participated in Upstate Air Quality Steering Committee meeting held at BMW. See Comment #4. 4. November 2004 - Greenville County submitted letter supporting SIP. See Comment #5. 5. Greenville County implemented the following measures during 2004 and 2005: purchased alternate fuel vehicles (Greenville purchased 19 such vehicles since November 2004); published and distributed brochures about improving air quality ; sent out notices on high ozone days and developed audio commercials for local radio stations to broadcast during ozone awareness week and ozone season; broadcasted radio announcements and information through the County's Cable TV channel, i	1. June 25, 2004 2. June 25, 2004	43.01 tons/season N/A	9.06 tons/season 234.1 tons/yr		Upstate Air Quality Staff Advisory committee will be developing a business partnership plan to involve local industries in announcing ozone alerts, participating in ride share programs and adopting the same or similar list of initiatives that Greenville County adopted from the SELC.
2. Designate an Ozone Action Coordinator	Designate a staff person in each County who will be responsible for coordination of counties ozone programs	County has an Ozone Coordinator.	March 2003	N/A	N/A	N/A	See Comment #5
3. Seek low sulfur fuels as early as possible	Continue to coordinate with representatives of colonial and Plantation pipelines, refiners, and State representatives to ensure that the upstate has the opportunity to receive low sulfur fuels at the earliest date as they can be provided.	Committee continues to coordinate with representatives of Colonial and Plantation pipelines, refiners. See Comment #5. During 2005, Colonial Pipeline conducted studies that indicates that S.C., as well as others along the Colonial Pipeline are receiving sulfur levels that should help many of the non-attainment areas. Specifically: M and V are the grades used in South Carolina. The sulfur content averages shown below are by batch not volumetric weighted values. • M Grades: Average 139 High 330 • V Grades: Average 74 High 300.	on-going	directionally sound	directionally sound	N/A	

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4. Design and implement congestion management and Intelligent Transportation System (ITS) measures.	Implement congestion management projects: intersection and signalization improvements to alleviate traffic congestion, therefore, reducing emissions from idling vehicles; Implement Intelligent Traffic Systems such as automated advisory/alert messages to drivers on interstate highways. For example: advise motorist about an accident ahead and the use of alternate routes to avoid congestion, which minimize emissions from idle vehicles. Encourage and support improved traffic operational planning, engineering and maintenance for existing and future transportation infrastructure.	The Spartanburg Area Transportation Study (SPATS) MPO continues to program funds for congestion management plan on several major thoroughfares; cameras and variable message boards have been installed on I-85 through Anderson, Greenville and Spartanburg Counties. Current SPATS projects designed to manage congestion without adding lanes to a thoroughfare include: Spartanburg City Traffic Signalization, SC 9 Signal Coordination, and intersection improvements along Old Furnace Rd. In addition, through its Enhancement Program, SPATS continues to fund pedestrian and bicycle education efforts, and specific projects on the ground. The Long Range Transportation plan, currently being revised, will include an updated congestion management plan and a bicycle and pedestrian plan.	on-going	directionally sound	directionally sound	N/A	Information about SPATS programs are available at www.spartanburgcounty.org
5. Use of hybrid vehicles	Encourage people, public and private organizations to purchase hybrid vehicles as they replace vehicles/fleet Encourage that 10% of public agencies fleet have hybrid vehicles (use of hybrid vehicles does not require changes in infrastructure for dispensing fuel). Encourage public agencies to require purchasing hybrid electric vehicles (HEVs) through the State vehicle contract.	Spartanburg County will investigate possibilities regarding purchasing hybrid vehicles for its fleet. Budget difficulties, however, continue to make this element a challenge.	on-going	directionally sound	directionally sound	N/A	
6. Use higher efficiency engines for school buses	Require purchase of high efficiency engines for school buses as they are replaced. In South Carolina, the SC Department of Education is in charge of maintenance of school buses. DHEC is working with SC Department of Education to obtain grants from EPA. Promote an Adopt-A-School-Bus Program. Endorse a statewide recommendation for the State to take the lead	Approximately 20 diesel buses will be retrofitted with particulate filters during 2006. (additional reductions of PM are also expected) The South Carolina Department of Education purchased 73 used school buses from a Kentucky school district that is replacing them with new vehicles. In addition to these 73 used buses, the Education Department purchased 61 new buses that should be on the road in late 2005.	on-going	directionally sound	directionally sound	N/A	Reductinos accounted for under School Bus Retrofit Project
7.a. Develop incentive programs and opportunity for citizens to choose alternative transportation modes. Establish intermodal connections with an emphasis on mass transit	WALKING/BIKING Biking and pedestrian pathways are being added to all new SPATS widening projects. SC 295 Phase 2 will include an offset shared use path along most of the length of the road improvement. In addition, the upcoming widening of SC 9 will include both bike and pedestrian facilities, where appropriate.	1. The SPATS (Spartanburg Area Transportation Study) Metropolitan Planning Organization (MPO) is one of thirteen areas across the nation selected by the National Center for Bicycling and Walking (NCBW) for the 2004-2005 "Walkable Community Workshops" program. This shared-cost workshop project, pledging staff and financial resources in exchange for technical assistance and training from NCBW, featured workshops in eight different areas* of the SPATS MPO during the week of May 23-27, 2005. Workshops were held in the city of Spartanburg, Boiling Springs, Pacolet, Duncan, Cowpens, Chesnee, and on the Spartanburg eastside. Approximately 170 people participated. SPATS staff continues to be active in ongoing educational efforts aimed at encouraging alternate modes of travel.	on-going	directionally sound	directionally sound	N/A	Information about SPATS programs are available at www.spartanburgcounty.org
7.b. Offer free or reduced transportation cost on high ozone days.	MASS TRANSIT: Staff will work with SPARTA to discuss implementing a program to offer free or reduced fares on ozone action days.	on-going	on-going	directionally sound	directionally sound	N/A	
7.c. Reduce vehicle miles traveled by developing efficient user-friendly transit systems.	Integrate transportation planning with land use planning so public transit can make a comprehensive contribution to economic development and mobility; Remove local barriers to densification in downtowns, infill areas, and transit stations and corridors.	1. SPATS staff continues to assist SPARTA with maps and associated information. In addition, as SPARTA has lost over \$300,000 in operating expenses that it formerly acquired from Duke Power, staff is seeking ways to bridge the funding shortfall.	on-going	directionally sound	directionally sound	N/A	Comments #7
8. Review and update air emission inventory for the Upstate	Ensure all industrial sources still operating. Review industrial sources for plant closures. Identify major sources of NOx Map the locations of point sources (10% of point sources cannot be found). Map the specific locations and the area sources where coal is burned.	This was completed and forwarded to SCDHEC on a previous updated progress report. The information allowed DHEC to having more accurate emissions inventory.	on-going	directionally sound	directionally sound	N/A	SCDHEC
9. Support SCDHEC in evaluating and seeking reductions from major sources based on modeling	Coordinate with Duke Power to determine what NOx reductions are planned for the Lee Steam Plan Coordinate with the Williams Company to determine what NOx reductions are planned for the TRANSCO Pipeline. Support NOx reduction strategies in the State Implementation Plan Develop an Early Reduction Program with incentives for industrial facility (Tier Two Type emissions NOx sources)	See info on Duke Power included in Appendix 16 of EAC SIP (link in Comment #6). The Williams Company received DHEC permits to replace outdated "uncontrolled" compressors on the pipeline located in Duncan. Replacement of the compressors began in late 2004 and continue until late 2005. This will result in a significant Nox reduction for the Upstate.	on-going	N/A	40%	N/A	
10. Develop a program to offer to purchase or repair smoking vehicles (known as cash for clunkers).	Use funds generated from a license plate sales, registration fees, or license plate tax program to buy or repair high emitting vehicles from individuals. Purchase such vehicles from non-profit groups such as the Kidney Foundation, Goodwill, Salvation Army when they have been donated as charitable gifts. Consider accelerated vehicle retirement (scrappage) programs to encourage vehicle owners to voluntarily retire their vehicles sooner than they would have otherwise.	1. December 2004. No local action has taken place on this strategy. See Comment #5. No action taken in 2005.	on-going	directionally sound	directionally sound	Use funds from license plate sales	

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11. Ban open burning of on-site commercial clearing debris during ozone season (April - October)	Use SCDHEC model to determine the most effective method to ban open burning. Discuss modeling results with all local governments to consider adoption.	DHEC adopted regulations in mid 2004 restricting open burning. See Comment #6. DHEC encourages Anderson, Greenville, and Spartanburg to actively notify all residents that the statewide ban is now in force and violations are punishable by law. At the November 2005 Air Quality Steering Committee meeting, the Committee directed staff to coordinate with local governments to enforce DHEC's burning ban year-round. Staff will schedule meetings with Administration and pertinent departments to discuss this measure, and how Spartanburg County and help to implement it.	on-going	directionally sound	directionally sound	N/A	See Comment #6
12. Create incentives for the purchase of high efficiency and low emissions vehicles.	Offer tax credits for vehicles with high efficiency gas consumption or low emissions. Offer tax credits for low mileage vehicles instead of high mileage vehicles	December 2004 - developing draft bill to offer reduced tax incentives for those purchasing low emitting vehicles.	on-going	directionally sound	directionally sound	N/A	See Comment #5
13. Use land-use and transportation planning to improve air quality	Include air quality measures as a part of the land-use and transportation planning process.	1. Staff will discuss with Administration whether ordinances conducive to cluster developments, neo-traditional development and mixed-use developments can be offered within our Unified Land Management Ordinance.	on-going	directionally sound	directionally sound	N/A	
****Develop air quality best management practices (BMPs)_ for construction sites	Develop a generic list of BMPs Develop management practices for construction debris. Develop management practices for emissions from construction vehicles. Develop management practices for traffic controls during construction.	A bill titled; An act concerning the promotion Of alternative use fuel, and hybrid propulsion System For transportation purposes was submitted to the SC House of representatives in January 2005. The bill is now in committee. In summary, the bill provides tax credit for vehicles using alternative fuel or hybrid propulsion vehicles. The credit is allowed against the tax imposed by for the purchase of vehicles licensed in South Carolina which use, or which are converted within 120 days of purchase to use, clean-burning fuel. Specifically the intent of the bill will apply for income tax years beginning on or after January 1, 2004, but prior to January 1, 2013. The tax credit will be allowed for the purchase of an alternative fuel or hybrid propulsion vehicle, and for a motor vehicle that is converted to use alternative fuel, for the replacement of the power source with a power source that uses alternative fuel	on-going	directionally sound	directionally sound	N/A	See Comment #2
14. Implement a program to encourage use of green power.	Capture emissions from landfills to produce green power, e.g., BMW is utilizing Palmetto Landfill emissions to produce energy for its plant. Implement a Purchase Green Power program when available. Green power is electricity generated by renewable resources like solar, wind, and even decomposing garbage in selected landfills. These resources are replenished naturally and minimize harm to the environment.	BMW, located in Spartanburg County, is using Spartanburg County's Palmetto Landfill's emissions to produce energy for its plant. A Green Power station will be constructed at the Anderson Regional Landfill in 2006. Santee Cooper, through Blue Ridge Electric Cooperative, recently began offering the purchase of Green Power to Anderson, Greenville, Oconee, Pickens and Spartanburg County residents. Residential customers who increased their purchase of Green Power by 2 blocks were offered a free energy analysis between October 1 and December 31, 2005.	on-going	directionally sound	directionally sound	N/A	
15. Promote route efficiency for delivery vehicles, trash collection etc.	Encourage business to consolidate distribution and collection routes to improve efficiency and reduce emissions from their fleets. Maximize route efficiency for public services such as garbage collection, delivery vehicles, and other vehicle trips to reduce fuel usage.	1. December 2004. No local action has taken place on this strategy. No action taken.	on-going	directionally sound	directionally sound	N/A	See Comment #5
16. Establish a clean air partnership with business and industry.	Encourage and coordinate alternate work schedules such as staggered work hours for business, industry and local governments. Establish park and ride lots serving perimeter counties along major corridors. Make the public aware of the park-and-ride concept: media could assist in publicizing which programs are available. Encourage carpooling/vanpooling as an option where employees living in the same area agree to ride to work together rather than to drive their individual vehicle to work. Consider parking facility controls that can include employers offering a tax-free transit/vanpool benefits and which limit the amount of parking and encourage carpooling, mass transit, etc. Encourage telecommuting. Adopt a Bus Program. Develop funding to be used for matching grants fund for several EAP strategies. Develop a core competency and assisting the Upstate EAP group in writing grant proposal.	1 In the November 2005, the Air Quality Steering Committee directed staff to begin addressing this strategy before the 2006 ozone season.	on-going	directionally sound	directionally sound	N/A	

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17. Establish an active public awareness campaign.	Develop an editorial board to discuss air quality issues and a development of a relationship with media. Use alert messages year round, not only during ozone season; Utilize public service announcement, newspapers, weather channels, and other media outlets to notify citizens of high ozone days; Utilize TV Channels to issue high ozone alerts using the crawl bar at bottom of TV screens. Encourage health organizations to sponsor ozone alerts in media. Enhance ozone awareness (Outreach-communication): assign a local agency to develop and implement a program to educate and motivate individuals to take actions to minimize ozone pollution. Includes a focused distribution of educational materials, dissemination of SCDHEC ground-level ozone forecast, increased media alerts to specific audiences, and includes action oriented components (i.e. ridesharing, telecommuting, etc.). Develop a campaign to encourage things such as refueling vehicles during evenings, not topping off tanks when refueling, using lawnmowers during evenings instead of during high ozone hours, using of electric lawn mowers. Develop a license plate program to generate revenue to implement the public awareness campaign. Develop awareness program on tax savings for purchasing high efficiency vehicles.	1. Spartanburg County staff will utilize SCDHEC materials in advancing ozone awareness, and will consider more active strategies including county website information and variable message signs along the interstate highways.	on-going	directionally sound	directionally sound	N/A	
18. Promote research in energy efficiency at local universities, industries, energy companies, federal government, and other institutions that improve air quality.	Establish programs to research energy efficiencies at local universities, e.g., Institute for Energy Studies at Clemson University. Encourage business and industry to utilize the research from these programs to make the best decision concerning the purchase or upgrade of furnaces and boilers.	1. December 2004. No local action has taken place on this strategy. See Comment #8. ALTERNATIVE FUELS: In 2005, Clemson University Chemical engineering professor Mark C. Thies received an \$856,000 award from the Department of Energy (DOE) to develop more efficient processes for the centralized production of hydrogen by splitting water. The award was one of only three made nationwide under DOE's Nuclear Hydrogen initiative. In addition to Thies, the project team includes fellow Clemson David Bruce, John O'Connell from the University of Virginia and Max Gorenshek from Savannah River National Lab. The Clemson team will interact not only with U. S. engineers and scientists but also with those in France, Italy, and Japan, all of whom have teams working on related processes. Clemson University is developing the International Center for Automotive Research (Clemson-ICAR) in Greenville, SC. The ICAR project will be the premier automotive and motorsports research and educational center in SC. Research will emphasize development of innovative materials and processing technologies, which will en	on-going	directionally sound	directionally sound	N/A	
19. Use of alternate fuels.	Direct local Planning Commissions to identify areas where alternative fuels will be best suited. Encourage the use of alternate fuels; Assist with establishing alternative fuel infrastructure for private sector clean fuel fleets. Fuels other than gasoline and diesel that are used to power on-road vehicles. Examples of alternate fuels include bio-diesel, electricity, ethanol, hydrogen, liquefied petroleum gas, methanol, and natural gas. Encourage a clean-fuel fleet program for centrally fueled fleets of more than 10 vehicles.	1. December 2004. No local action has taken place on this strategy. See Comment #8. 2. June 2005 - local company began selling E-85 at 2 stations located along Interstate 85, sub-committee of Upstate Air Quality Staff Advisory Committee developed wording for bill concerning the promotion of alternative use fuel. See Comment #8. The Upstate has moved forward with the distribution of E85 fuel. By the end of 2005, there will be at least 12 additional distribution stations. ALTERNATE FUELS: In 2005, Clemson University Professor James G. Goodwin, Jr., chair of the Clemson's chemical and biomolecular engineering department, received a DOE grant for energy research through DOE's State Technologies Advancement Collaborative. Goodwin's work focuses on the performance of iron-based bimetallic catalysts that are crucial to synthesis of clean fuels, additives and lubricants derived from coal and biomass gasification. Clemson will lead a partnership that includes Louisiana State University, the S.C. State Energy Office, the Louisiana State Energy Office, North Carolina's Research Triangle In	on-going	directionally sound	directionally sound	N/A	

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20. Evaluate the use of High Occupancy Vehicle (HOV) lanes using existing lanes.	Evaluate use of HOV on three (3) lane interstate highways; Show the advantages of designating HOVs; Pass laws establishing regulations on HOVs lanes such as the threshold in the number of passengers (perhaps two) in the vehicle using HOVs lanes and time of day for the lane to be designated as HOV (rush hour). Pass laws authorizing issuance of tickets for violations of HOVs lanes regulations, i.e., one-passenger vehicles using HOV lanes on designated hours.	1. December 2004. No local action has taken place on this strategy. See Comment #5. - Traffic engineers with SCDOT indicate that because traffic volumes on I-85 exceed 100,000 vehicles daily on the 3 lanes of the interstate it would be unwise to convert one of the three lanes to a HOV lane. The offsetting increase in congestion in the two remaining lanes would predictably increase Nox emissions by an amount exceeding the any reductions gained from traffic moving in the HOV lane. HOV lanes work best when they are paralleled by at least 4 or more free flow lanes. No further actions are planned.	completed	directionally sound	directionally sound	N/A	No further action planned
21. Modify speed limits for optimum fuel efficiency.	Direct SCDHEC and SCDOT to take the lead role. Direct Planning Commissions to assist SCDHEC in modeling.	The SPATS MPO was designated as urban by the US Census following the 2000 census and as a result speed limits on the interstate highways in Spartanburg County have been established at 60 mph.	completed	N/A	N/A	N/A	No further action planned
22. Develop process for evaluating and minimizing impact of major projects such as shopping centers, schools, and subdivisions.	Study impact of post construction traffic flow. Study impact of construction activities.	1. December 2004. No local action has taken place on this strategy. No action taken in 2005.	on-going	N/A	N/A	N/A	See Comment #5
23. Community Schools to reduce vehicle miles traveled and encourage biking and walking for students and parents by encouraging smaller community-based schools that are integrated into neighborhoods	Eliminate minimum acreage requirements for school sites. Cap student populations per facilities. Require coordination among school boards and local governments to plan school sites and avoid conflicts with local planning goals. Favor restoration and construction of community-based small schools over new construction of remote mega schools.	1. December 2004. No local action has taken place on this strategy.	on-going	N/A	N/A	N/A	See Comment #5
Comments: 1. December 2004 - SC EAC SIP - activity not quantified for several reasons (first) in accordance with EAC Protocol, after all adopted Federal and State controls were accounted for in the modeling, it was determined that local controls were not necessary to demonstrate attainment of the 8-hour ozone standard. Measures were submitted by the local areas to show their continued support and commitment to the EAC process. (second) this activity is directionally sound and should provide air quality benefits and in some cases measurable results. The progress toward implementing this activity and the benefits derived will be documented as a part of the ongoing reporting requirements. 2. December 2003 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac.html - additional information provided by the county to include "findings", "advantages/disadvantages", "recommendations", "costs", etc.... 3. March 2004 - Local Early Action Plan - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0304.asp 4. June 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0604.asp 5. December 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_1204.asp 6. December 2004 - SC EAC SIP - Including Appendix 8 (Local Early Action Plans and the Air Quality Awareness and Improvement Policy) and Appendix 16 (County Level Emission Reductions and Descriptions for the Ozone EAC Areas)- See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html 7. April 20, 2005 - Correspondence to Mr. Palmer including clarifying supplemental information to the EAC SIP submittal of December 2004. - See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html 8. June 2005 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0605.asp							